



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/688,006 | 10/13/2000 | Elizabeth Sisley | 1142.001US1 | 9173 |

21186 7590 11/07/2007
SCHWEGMAN, LUNDBERG & WOESSNER, P.A.
P.O. BOX 2938
MINNEAPOLIS, MN 55402

EXAMINER

DAY, HERNG DER

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2128

| | |
|-----------|---------------|
| MAIL DATE | DELIVERY MODE |
|-----------|---------------|

11/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/688,006

Applicant(s)

SISLEY, ELIZABETH

Examiner

Herng-der Day

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-11 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-11 and 13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to Applicant's Amendment and Response ("Amendment") to Office Action dated January 31, 2006, filed November 24, 2006.

1-1. Claims 1, 5-7, 9, and 13-15 have been amended. Applicant is reminded of the requirement of Amendments to the Claims, "All claims being currently amended must be presented with markings to indicate the changes that have been made relative to the immediate prior version." See MPEP § 714(II)(C)(B). For example, in claim 14, Applicant added, "a value selected from the group comprising:" between "using" and "a latency value" in lines 2-3 of the claim without any markings. The changes in the amended claim 14 (i.e., the added "a value selected from the group comprising:") must be shown by underlining.

1-2. Claims 1-3, 5-11, and 13-16 are pending.

1-3. Claims 1-3, 5-11, and 13-16 have been examined and rejected.

Specification

2. The amendment filed November 24, 2006, is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The amendments to Table 6 on page 21 as shown at page 2 of the Amendment filed November 24, 2006.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-3, 5-11, and 13-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

4-1. Claim 1 recites the limitation, “preallocating each coupling in the set of couplings to one of the plurality of computing resources” in lines 9-10 of the claim, which does not appear to have support in the original disclosure. For example, as described in the specification at page 29, lines 21-23, “Pre-allocation also has positive and negative categories, similarly capturing *tasks that are required to be allocated* either on or away from, a specific platform”. Therefore, preallocating each *coupling* to computing resource does not appear to have support in the original disclosure.

4-2. Claim 9 recites the limitation, “preallocating each coupling in the set of couplings to one of the plurality of computing resources” in lines 10-11 of the claim, which does not appear to have support in the original disclosure. For example, as described in the specification at page 29, lines 21-23, “Pre-allocation also has positive and negative categories, similarly capturing *tasks that are required to be allocated* either on or away from, a specific platform”. Therefore,

Art Unit: 2128

preallocating each *coupling* to computing resource does not appear to have support in the original disclosure.

4-3. Claims not specifically rejected above are rejected as being dependent on a rejected claim.

5. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for determining the coupling strength of the data coupling using a latency value, a timing strength, a frequency strength, and a bandwidth strength, does not reasonably provide enablement for determining the coupling strength of the data coupling using a value selected from the group comprising: a latency value, a timing strength, a frequency strength, and a bandwidth strength. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

5-1. Claim 14 recites the limitation, “the coupling strength of the data coupling is determined using a value selected from the group comprising: a latency value, a timing strength, a frequency strength, and a bandwidth strength.” in lines 2-4 of the claim. However, as described in the specification in lines 5-7 of page 27, the coupling strength is determined using all the values selected from each listed element of the group. In other words, the coupling strength of the data coupling is determined using a latency value, a timing strength, a frequency strength, and a bandwidth strength.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2128

7. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7-1. Claim 15 is a dependent claim of the canceled claim 12.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-3 and 5-8 are rejected under 35 U.S.C. 101 because the inventions as disclosed in claims are directed to non-statutory subject matter.

9-1. Claims 1-3 and 5-8 are directed to a computerized method for determining an allocation of software and data components in a distributed system. This claimed subject matter lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring article/phenomenon) since it fails to produce a useful, concrete, and tangible result.

As stated in the MPEP 2106 IV, "Likewise, a claim that can be read so broadly as to include statutory and nonstatutory subject matter must be amended to limit the claim to a practical application. In other words, if the specification discloses a practical application of a section 101 judicial exception, but the claim is broader than the disclosure such that it does not require a practical application, then the claim must be rejected." and "The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a 35 U.S.C. 101 judicial exception,

Art Unit: 2128

in that the process claim must set forth a practical application of that judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”).

Specifically, the claimed subject matter does not produce a tangible result because the claimed subject matter fails to produce a result that is limited to having real world value rather than a result that may be interpreted to be abstract in nature as, for example, a thought, a computation, or manipulated data. More specifically, the claimed subject matter provides for defining a set of components and determining modularity and coupling strength. This produced result remains in the abstract and, thus, fails to achieve the required status of having real world value.

Applicant's Arguments

10. Applicant argues the following:

10-1. §112 Rejection of the Claims

(1) “Applicant has amended claims 1 and 9 to replace "control partitions" with "code partitions" as stated in the specification on page 30, lines 10-11.” (page 7, paragraph 3, Amendment)

(2) “FIG. 1 and the accompanying text describing FIG. 1 illustrates an example hardware platform described as having computing resources, and the specification, at page 29 describes allocating to platforms. In view of the fact that platforms have computing resources, the recitation is fully supported by the specification.” (page 7, paragraph 4, Amendment)

(3) "Applicant has amended Table 6 to correct a typographical error such that the use of the terms "minimum" and "maximum" is now consistent with the usage in the other rows of the table." (page 8, paragraph 1, Amendment)

(4) "Applicant has amended claims 1 and 9 such that at least one coupling of each type is used in the prepartitioning recited in claims 1 and 9." (page 8, paragraph 2, Amendment)

(5) "Applicant has amended claim 1 and 9 to recite that a coupling strength is determined for each coupling." (page 8, paragraph 3, Amendment)

(6) "Applicant has amended claims 1 and 9 to clarify that each component has a code and data segment, thereby providing consistent and definite usage of the terms." (page 8, paragraph 5, through page 9, paragraph 1, Amendment)

Response to Arguments

11. Applicant's arguments have been fully considered.

11-1. Applicant's arguments (1), (4), and (5) are persuasive. The related portions of rejections of claims 1-3, 5-11, and 13-16 under 35 U.S.C. 112, first paragraph, in Office Action dated January 31, 2006, have been withdrawn.

11-2. Applicant's argument (2) is not persuasive. As described in lines 4-5 on page 10, "FIG. 1 is a diagram of the hardware and operating environment in conjunction with which embodiments of the invention may be practiced." Claims 1 and 9 recite the limitations "modeling a target system, the target system having a plurality of computing resources" and "preallocating each coupling in the set of couplings to one of the plurality of computing resources". In other words, it is the target system having a plurality of the "computing resources" which are recited in the

Art Unit: 2128

“preallocating” step. There is no evidence that the recited “computing resources” are the resources which embodiments of the instant invention may be practiced. Furthermore, the specification at page 29 describes allocating *tasks*. Therefore, preallocating each *coupling* to computing resource does not appear to have support in the original disclosure.

11-3. Applicant’s argument (3) is not persuasive. The amendment to Table 6 on page 21 does not appear to have support in the original disclosure. Applicant is required to provide support of this amendment.

11-4. Applicant’s argument (6) is persuasive. The rejections of claims 2, 3, 10, and 11 under 35 U.S.C. 112, second paragraph, in Office Action dated January 31, 2006, have been withdrawn.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Herng-der Day whose telephone number is (571) 272-3777. The Examiner can normally be reached on 9:00 - 17:30.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner’s supervisor, Kamini S. Shah can be reached on (571) 272-2279. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

Art Unit: 2128

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Herng-der Day
October 22, 2007

H.D.


KAMINI SHAH
SUPERVISORY PATENT EXAMINER